AGC/WSDOT Structures Team Members

January 16, 2004

Attendees:	Company	Phone	E-mail
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The meeting commenced at 9:00 AM with introduction of Jerry Weigel the Bridge and Structures Engineer.

Security of Bridges

Jerry informed the team that security of bridges has become a major concern nationally. Jerry is a member of AASHTO task force trying to formulate how best to identify and protect nation's bridges. He said that 70% of the bridges in the State of Washington are constructed with prestressed girder superstructure. There is a proposed research grant through the City of Seattle for vulnerability assessment of prestressed girder bridges subjected to explosives.

Jerry passed out a handout of the current findings of Mr. James Ray of the U.S. Army and the proposed cross sections of two prestressed bridges that the research is to be conducted on. There will be two single span prestressed girder bridges constructed on mudsills. The region under the girders will then be excavated, and explosive charges will be placed under the girders. The blast operation and monitoring will be conducted at the Yakima Training Center.

The budget for this research work is limited and donations for different components of the bridges will be accepted. Currently, the Morse Brothers and the Central Premix have donated the girders.

Action Plan: this was an informative topic. No further action by the team is needed.

Use of Inserts in Columns for Utility Attachments

Mo passed out two pictures of bridge columns recently constructed. One showed utilities attached with drilled epoxy adhesives and the other with mechanical hardware. The Bridge design Office will not allow drilling into the columns for connection of utilities in the future. This method may severely damage the spirals in the columns that are critical for confinement of the column cores during a seismic event. A proposal to use inserts in the columns as an option was unanimously opposed by the Contractors. Use of epoxy jells for attachment of Unistruts was also proposed as a potential option.

Action Plan: use of inserts in columns will not be shown on the plans. No further action is needed.

Alternate Stirrup Arrangement for Prestressed Girders

Charlie presented a request from the Rainier Steel. The proposal allows for the girder stirrups to be prebent in the shop and augmented with ties in the field. The team also proposed use of closed loop shaped stirrups in the girders. This is a current practice for when stay in place precast deck panels are allowed.

Action Plan: Jugesh will evaluate the proposal and provide a reply at the next meeting.

Review/approval of Nov. 03 Minutes

The meeting notes were approved with two typo corrections.

Action Plan Reports

Std. Specs 6-02.3(5)C – Mo passed out WACA's proposal that complies with the ASTM C 94 concerning the cement tolerances. After some deliberation, the team agreed to accept the proposal.

Action Plan: Mo will include the proposal in the Amendments.

Problems with Use of Plastic Chairs – Mo passed out a picture of Sprague Ave project in Spokane where the chairs were placed next to a drip groove strip on the deck cantilever. The strip prevented the chairs from sliding and worked well.

Action Plan: plastic chairs work fine. No further discussions are needed.

Post-tensioned Tendon Grouting

Mo showed a video, provided by DSI, that shows a number of voids and substantial water inside a tendon of a recently constructed bridge in an Eastern State. Recent

findings in UK and Florida concerning severely corroded tendons have alarmed a number of States to evaluate their p.t. tendon grouting procedures. Dr. Pollock of the WSU conducted a research last summer on the condition of the p.t. tendons and anchorages of the East Ramp of the I-90 demolition next to the Safeco Field. He has reported no evidence of any corrosion in the tendons or anchorages. The Bridge was constructed in 1984. Mo said due to concerns with segregation of cement and water during pressurizing of the grout, the State is evaluating possible use of proprietary non-segregating grouts for future projects. Millard offered to show a video from the Florida DOT of their current grouting procedures

Action Plan: this presentation was intended for information of the team. Mo will inform the team of any future changes to the grouting specs.

Cold Weather Curing Draft

Mo submitted the latest draft of this Spec to members. This latest draft is re-arranged by Bob Hilmes as a result of comments received from the PEs around the State.

Action Plan: members will review and further evaluate the changes by the next meeting before it is added to the amendments.

Criteria for Vibration Limits Adjacent to Green Concrete – Topic #26

Mo passed out a proposed draft of this new spec. The following comments were offered:

- Decrease the initial compressive strength from 3000 psi to 1400 – 2000 psi
- Add the word “horizontal” to 30’
- Include what is expected from initial placement to 6 hours

The team members also wanted more information from an expert in this field

Action Plan: Mo will invite an expert in the field of seismology to address the group

Future Topics

Topics #23 & #27 were selected by the team to be addressed at the next meeting

The meeting adjourned at 12:00 PM

Next meeting is scheduled for Feb. 20th, 2004